

## Wind XII Update September 1, 2020

### **A. Background**

This is MidAmerican Energy Company's ("MidAmerican") status update for the Iowa Utilities Board ("Board") in response to the Board's December 4, 2018 Final Decision and Order, issued in Docket No. RPU-2018-0003 ("Order"). The Order does not require this update, but MidAmerican assumes it is the Board's desire that this update be filed semi-annually like the updates the Board has required for other Projects. Pursuant to the Board's April 19, 2019 *Order Consolidating Semi-Annual Reports*, the updates for the Wind VIII through Wind XII projects, and the Repowering project, are now filed in Docket No. 2018-0003.

### **B. Status for Wind XII Iowa Project (Docket No. RPU-2018-0003)**

The Wind XII facilities are planned to be installed over two years at multiple sites. Through June 30, 2020, expenditures on Wind XII totaled \$706.7 million. The currently estimated project cost is \$921.7 million, or \$1,560/kW. The four largest components of the \$921.7 million total are: (i) \$[REDACTED] million including spent, committed and estimated amounts for the purchase of the wind turbines, (ii) the balance of plant services are estimated at \$[REDACTED] million, (iii) site acquisition costs are estimated at \$[REDACTED] million, (iv) substation development costs are estimated at \$[REDACTED] million, and (v) off-site transmission costs are estimated at \$[REDACTED] million. (An unredacted copy of this page has been provided pursuant to a Request for Confidential Treatment.) The remaining project costs are estimated at \$60 million, approximately 7% of the total estimated cost, for general project expenses such as operations and maintenance buildings, MidAmerican labor, contractor labor, AFUDC, etc. The estimated project cost of \$1,560/kW is at the cost cap of \$1.56 million per MW (including AFUDC). The entire Project is expected to be in-service by December 31, 2020.

#### Actual Operating and Capital Costs of Wind XII

Through June 30, 2020, operating costs total \$[REDACTED] million. Operating capital costs associated with Wind XII during this period have been \$[REDACTED] million. (An unredacted copy of this page has been provided pursuant to a Request for Confidential Treatment.)

#### Revenue Sharing Reporting

Revenue Sharing for each calendar year is reported in a separate filing with the Iowa Utilities Board in February of each year.

#### Income from PTCs, REC Sales, Capacity Sales, and Net System Benefits Attributable to Wind XII

Through June 30, 2020, PTC's generated from Wind XII totaled \$9.3 million. There were no REC sales. There were no capacity sales associated with these wind assets and net system benefits totaled \$3.5 million.

Annual Report Regarding the Quantity of All Environmental Benefits Retired on Behalf of Each ICR Customer That Elects Retirement per Ratemaking Principle No. 7 (Environmental Benefits)

- i. Quantity of Environmental Benefits Retired on Behalf of Each Electing ICR Customer: MidAmerican will report on retirement of these environmental benefits in its March 2021 update.
- ii. Quantity of Environmental Benefits Sold and the Value of Sold Benefits Maintained in the Regulatory Liability Account Defined in Ratemaking Principle No. 7: MidAmerican will report on retirement of these environmental benefits in its March 2021 update.

**C. Transmission Studies and Off-site transmission**

Please see the transmission related discussion under the Project update below.

**202.4 MW Ida Grove II Site**

**Note:** Due to the final contracted turbine nameplate capacity of 2.52 MW/turbine for the 73 non-production tax credit safe harbor turbines, and the fact that fractions of turbines cannot be installed, it is important to note that the final turbine layout at the Ida Grove II Site resulted in a total nameplate capacity, for the site, of 202.4 MW, not 200.9 MW as initially proposed in MidAmerican's ratemaking principles filing. The additional 0.02 MW per turbine for the 73 turbines will result in the aggregate capacity from the Wind XII wind farms slightly exceeding the 591 MW Wind XII size cap. The slightly increased capacity will provide a small amount of additional production tax credit, environmental and retail energy benefits during periods when the wind resource is strong enough to make use of the incremental capacity. MidAmerican does not intend to separately track benefits associated with the increased capacity or treat those benefits differently than benefits from the rest of the project. MidAmerican recognizes the Board has the authority to make a determination on the prudence of such treatment of the incremental benefits associated with capacity that is in excess of the Wind XII size cap in a future rate proceeding.

The Ida Grove II site, located in Ida County, is a wind farm which was acquired from a subsidiary of Invenegy that interconnects to the 345 kV system at the Ida County West substation in Ida County. Construction at Ida Grove II began in 2019 with all turbines placed in-service by December 22, 2019.

MISO queue project J412 was studied in the August 2015 West Definitive Planning Phase (DPP) System Impact Study (SIS) which is now completed. MISO's completed transmission study is available at the following MISO link:

[https://www.misoenergy.org/planning/generator-interconnection/GI\\_Studies](https://www.misoenergy.org/planning/generator-interconnection/GI_Studies)

Once on the MISO site, select the desired documents.

A Conditional Generator Interconnection Agreement (Conditional GIA) was executed on August 23, 2017.

Operation of the site is guided by the Conditional GIA. Until all identified upgrades and contingent facilities are completed, the output may be limited on an annual basis through the MISO Annual ERIS Evaluation and/or on a quarterly basis through the MISO Quarterly Operating Limit (QOL) review that could reduce output by as much as its fully requested output. As reported in previous updates on other MidAmerican Wind Projects, in response to input from stakeholders, including MidAmerican, MISO reviewed its QOL review process. MISO's revised process reduces, but does not eliminate, the possibility of any future limitations at the site while the site is part of the QOL review.

In MISO's Annual ERIS Evaluation, it was determined that 4.9 MW of the 200 MW (the GIA injection limit) is subject to curtailment in the QOL process for MISO's 2020-2021 planning year (June 1, 2020 through May 31, 2021). To date, this site has not been limited in any of the QOL studies. MISO's forward-looking results of the next two seasons do not show the site being limited.

### **168.8 MW Diamond Trail Site**

The Diamond Trail site, located in Iowa County, is a wind farm which was acquired from a subsidiary of Invenegy that interconnects to the 345 kV system at the Diamond Trail substation in Iowa County. Construction at Diamond Trail began in 2019 and the wind farm is scheduled to be placed in-service in 2020.

MISO queue project J530 was studied in the February 2016 West Definitive Planning Phase (DPP) System Impact Study (SIS) which is now completed. MISO's completed transmission study is available at the following MISO link:

[https://www.misoenergy.org/planning/generator-interconnection/GI\\_Studies](https://www.misoenergy.org/planning/generator-interconnection/GI_Studies)

Once on the MISO site, select the desired documents.

A Conditional GIA was executed on February 27, 2019.

Operation of the site is guided by the Conditional GIA. Until all identified upgrades and contingent facilities are completed, the output may be limited on an annual basis through the MISO Annual ERIS Evaluation and/or on a quarterly basis through the MISO Quarterly Operating Limit (QOL) review that could reduce output by as much as its fully requested output. As reported in previous updates on other MidAmerican Wind Projects, in response to input from stakeholders, including MidAmerican, MISO reviewed its QOL review process. MISO's revised process reduces, but does not eliminate, the possibility of any future limitations at the site while the site is part of the QOL review.

In MISO's Annual ERIS Evaluation, it was determined that 250 MW of the 250 MW (the GIA injection limit) is subject to curtailment in the QOL process for MISO's 2020-2021 planning year (June 1, 2020 through May 31, 2021). MISO's forward-looking results of the next two seasons do not show the site being limited.

The structure replacements on the Diamond Trail-Hills 345 kV line to increase the rating were completed in June 2020.

### **131.2 MW Southern Hills Site**

The Southern Hills site, located in Adair, Adams and Union Counties, is a wind farm that was self-developed by MidAmerican and that interconnects to the 345 kV system in Adair County. Construction at Southern Hills began in 2020 and the wind farm is scheduled to be placed in-service in 2020.

MISO queue project J527 was studied in the February 2016 West Definitive Planning Phase (DPP) System Impact Study (SIS) which is now completed. MISO's completed transmission study is available at the following MISO link:

[https://www.misoenergy.org/planning/generator-interconnection/GI\\_Studies](https://www.misoenergy.org/planning/generator-interconnection/GI_Studies)

Once on the MISO site, select the desired documents.

A Conditional GIA was executed on February 26, 2019.

Operation of the site is guided by the Conditional GIA. Until all identified upgrades and contingent facilities are completed, the output may be limited on an annual basis through the MISO Annual ERIS Evaluation and/or on a quarterly basis through the MISO Quarterly Operating Limit (QOL) review that could reduce output by as much as its fully requested output. As reported in previous updates on other MidAmerican Wind Projects, in response to input from stakeholders, including MidAmerican, MISO reviewed its QOL review process. MISO's revised process reduces, but does not eliminate, the possibility of any future limitations at the site while the site is part of the QOL review.

In MISO's Annual ERIS Evaluation, it was determined that 250 MW of the 250 MW (the GIA injection limit) is subject to curtailment in the QOL process for MISO's 2020-2021 planning year (June 1, 2020 through May 31, 2021). MISO's forward-looking results of the next two seasons do not show the site being limited.

### **90.0 MW Palo Alto II Site**

The Palo Alto II site, located in Palo Alto County, is a wind farm which which was acquired from a subsidiary of Invenenergy and that interconnects to the 345 kV system at the Palo Alto

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substation in Palo Alto County. Palo Alto II has a separate interconnection but is co-located with the Wind XI Palo Alto wind farm. Construction at Palo Alto II began in 2019 and the wind farm is scheduled to be placed in-service in 2020.

MISO queue project J590 is being studied in the August 2016 West Definitive Planning Phase (DPP) System Impact Study (SIS) Phase 3 which kicked off on January 15, 2019. The final Phase 3 study was published on March 14, 2019. The Network Upgrade facility studies are currently underway.

A Provisional Generator Interconnection Agreement (Provisional GIA) was executed on November 7, 2017. A Conditional GIA is expected to be executed in August 2020 and will replace the existing Provisional GIA.

Once executed, operation of the site will be guided by the Conditional GIA. Until all identified upgrades and contingent facilities are completed, the output may be limited on an annual basis through the MISO Annual ERIS Evaluation and/or on a quarterly basis through the MISO Quarterly Operating Limit (QOL) review that could reduce output by as much as its fully requested output. As reported in previous updates on other MidAmerican Wind Projects, in response to input from stakeholders, including MidAmerican, MISO reviewed its QOL review process. MISO's revised process reduces, but does not eliminate, the possibility of any future limitations at the site while the site is part of the QOL review.

In MISO's Annual ERIS Evaluation, it was determined that 90 MW of the 90 MW (the GIA injection limit) is subject to curtailment in the QOL process for MISO's 2020-2021 planning year (June 1, 2020 through May 31, 2021). MISO's forward-looking results of the next two seasons do not show the site being limited.

### **Next Report**

MidAmerican's next update is due March 1, 2021.